

Dear Senators PATRICK, Agenbroad, Ward-Engelking, and
Representatives DIXON, DeMordaunt, Smith:

The Legislative Services Office, Research and Legislation, has received the enclosed rules of the
Division of Building Safety:

IDAPA 07.08.01 - Idaho Minimum Safety Standards and Practices for Logging - Proposed Rule
(Docket No. 07-0801-1901).

Pursuant to Section 67-454, Idaho Code, a meeting on the enclosed rules may be called by the
cochairmen or by two (2) or more members of the subcommittee giving oral or written notice to Research
and Legislation no later than fourteen (14) days after receipt of the rules' analysis from Legislative
Services. The final date to call a meeting on the enclosed rules is no later than 10/30/2019. If a meeting is
called, the subcommittee must hold the meeting within forty-two (42) days of receipt of the rules' analysis
from Legislative Services. The final date to hold a meeting on the enclosed rules is 11/29/2019.

The germane joint subcommittee may request a statement of economic impact with respect to a
proposed rule by notifying Research and Legislation. There is no time limit on requesting this statement,
and it may be requested whether or not a meeting on the proposed rule is called or after a meeting has
been held.

To notify Research and Legislation, call 334-4854, or send a written request to the address on the
memorandum attached below.



Eric Milstead
Director

Legislative Services Office

Idaho State Legislature

Serving Idaho's Citizen Legislature

MEMORANDUM

TO: Rules Review Subcommittee of the Senate Commerce & Human Resources Committee and the House Business Committee

FROM: Principal Legislative Drafting Attorney - Ryan Bush

DATE: October 10, 2019

SUBJECT: Division of Building Safety

IDAPA 07.08.01 - Idaho Minimum Safety Standards and Practices for Logging - Proposed Rule (Docket No. 07-0801-1901)

Summary and Stated Reasons for the Rule

The Division of Building Safety submits notice of proposed rulemaking at IDAPA 07.08.01 - Idaho Minimum Safety Standards and Practices for Logging. The proposed rule changes accomplish the following:

1. Allows the Idaho State Police and the Idaho Transportation Board to enforce these rules on public highways;
2. Eliminates outdated terminology and references to outdated equipment and practices;
3. Updates required safety equipment and procedures for employers and employees such as eye, face, and leg protection, machinery operator manuals, rope clamps, and inspection of rigging;
4. Clarifies procedures for ending a shift, reporting unsafe conditions, and loading, unloading, and dumping logs; and
5. Eliminates and simplifies certain provisions in accordance with the Red Tape Reduction Act.

Negotiated Rulemaking / Fiscal Impact

Negotiated rulemaking was conducted and notice was published in the June edition of the Idaho Administrative Bulletin. There is no fiscal impact associated with this rulemaking.

Statutory Authority

The proposed rulemaking appears to be within the statutory authority granted to the Division in Section 67-2601A, Idaho Code.

cc: Division of Building Safety
Patrick Grace

Kristin Ford, Manager
Research & Legislation

Paul Headlee, Manager
Budget & Policy Analysis

April Renfro, Manager
Legislative Audits

Glenn Harris, Manager
Information Technology

Statehouse, P.O. Box 83720
Boise, Idaho 83720-0054

Tel: 208-334-2475
www.legislature.idaho.gov

***** PLEASE NOTE *****

Per the Idaho Constitution, all administrative rules may be reviewed by the Legislature during the next legislative session. The Legislature has 3 options with this rulemaking docket: **1)** Approve the docket in its entirety; **2)** Reject the docket in its entirety; or **3)** Reject the docket in part.

IDAPA 07 – DIVISION OF BUILDING SAFETY

07.08.01 – IDAHO MINIMUM SAFETY STANDARDS AND PRACTICES FOR LOGGING

DOCKET NO. 07-0801-1901

NOTICE OF RULEMAKING – PROPOSED RULE

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking procedures. The action is authorized pursuant to Section 67-2601A, Idaho Code.

PUBLIC HEARING SCHEDULE: Public hearing(s) concerning this rulemaking will be scheduled if requested in writing by twenty-five (25) persons, a political subdivision, or an agency, not later than October 16, 2019.

The hearing site(s) will be accessible to persons with disabilities. Requests for accommodation must be made not later than five (5) days prior to the hearing, to the agency address below.

DESCRIPTIVE SUMMARY: The following is a nontechnical explanation of the substance and purpose of the proposed rulemaking:

In accordance with 2019 HB2, this proposed rulemaking allows the director of the Idaho State Police and the Idaho Transportation Board to enforce IDAPA 07.08.01 on public highways. The proposed rulemaking also updates and clarifies provisions of IDAPA 07.08.01, eliminates outdated terminology, eliminates reference to outdated equipment and practices, and requires important safety equipment and procedures. The proposed rulemaking requires employers and employees to use specific safety equipment and procedures related to the use of eye, face, head, hand, and leg protection; machinery operator manuals; U-bolt wire rope clamps; swing yarders; Flemish eye splices; and guyline extensions. Further, the proposed rulemaking eliminates language related to jerk wire, log dumps, log ponds, booms, towing, pond boats, tow boats, and rafting. The proposed rulemaking also clarifies procedures for checking in at the end of a shift, reporting unsafe logging conditions and practices, and loading logs.

In addition, this proposed rulemaking eliminates or simplifies provisions in IDAPA 07.08.01 to comply with the Red Tape Reduction Act (Executive Order 2019-02).

FEE SUMMARY: The following is a specific description of the fee or charge imposed or increased: N/A

FISCAL IMPACT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year resulting from this rulemaking: N/A

NEGOTIATED RULEMAKING: Pursuant to Section 67-5220(1), Idaho Code, negotiated rulemaking was conducted. The Notice of Intent to Promulgate Rules – Negotiated Rulemaking was published in the June 5, 2019 Idaho Administrative Bulletin, **Vol. 19-6, pages 40 through 41.**

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the materials cited are being incorporated by reference into this rule: N/A

ASSISTANCE ON TECHNICAL QUESTIONS, SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning the proposed rule, contact Larry Jeffres, Regional Manager, Division of Building Safety at (208) 277-6526 or at larry.jeffres@db.s.idaho.gov.

Anyone may submit written comments regarding this proposed rulemaking. All written comments must be directed to the undersigned and must be delivered on or before October 23, 2019.

Dated this 21st day of August, 2019.

Ron Whitney, Deputy Administrator
Division of Building Safety
1090 E. Watertower St., Ste. 150
P. O. Box 83720, Meridian, ID 83642
Phone: (208) 332-7150 / Fax: (877) 810-2840
ron.whitney@db.s.idaho.gov

**THE FOLLOWING IS THE PROPOSED TEXT OF DOCKET NO. 07-0801-1901
(Only Those Sections With Amendments Are Shown)**

**005. OFFICE – ~~OFFICE HOURS~~ MAILING ADDRESS ~~AND~~ STREET ADDRESS – ~~OFFICE HOURS~~
– WEB ADDRESS.**

The ~~principal place of business of the~~ Division's ~~of Building Safety, Logging Safety Program,~~ mailing and central office street address is ~~at the Division office located at~~ 1090 E. Watertower Street, Suite 150, Meridian, Idaho 83642. ~~The Logging Safety Program may also be contacted at 1250 Ironwood Drive, Suite 220, Coeur d'Alene, Idaho 83814, and at 2055 Garrett Way, Suite 4, Pocatello, Idaho 83201. All locations are~~ The office is open from 8:00 a.m. to 5:00 p.m., except Saturday, Sunday and legal holidays. The telephone number ~~of the office~~ is (208) 334-3950. ~~The and~~ and facsimile number ~~of the office~~ is ~~1-(877-)~~ 810-2840. The ~~Department website~~ web address is <https://dbs.idaho.gov>.
(3-29-17)()

006. PUBLIC RECORDS ACT COMPLIANCE.

These rules ~~contained herein have been promulgated according to the provisions of Title 67, Chapter 52, Idaho Code,~~ are subject to and ~~are~~ in compliance with the Public Records Act, Title 74, Chapter 1, Idaho Code. (3-29-17)()

(BREAK IN CONTINUITY OF SECTIONS)

012. EMPLOYER'S RESPONSIBILITY.

01. General Requirements. (6-30-19)T

a. Every employer subject to these rules shall furnish employment and maintain places of employment that are safe according to the standards as set forth herein. (6-30-19)T

b. Every employer shall adopt and use practices, means, methods, operations and processes that are adequate to render such employment and place of employment safe. (6-30-19)T

i. Employers shall place highly visible "LOGGING AHEAD" or similar-type warning signs at the entrances of active logging jobs. Employers shall also place "TRUCKS AHEAD," "TRUCKS ENTERING," "TREE FALLING," and "CABLES OVERHEAD," whenever applicable (6-30-19)T

ii. Every employer shall furnish to its crew a Company Emergency Rescue Plan. (6-30-19)T

c. Every employer should insure that Safety Data Sheets (SDS) are reasonably accessible for every hazardous material. (6-30-19)T

d. Every employer shall post and maintain in a conspicuous place or places in and about his place or places of business a written notice stating the fact that he has complied with the worker's compensation law as to securing the payment of compensation to his employees and their dependents in accordance with the provisions of Idaho law. Such notice shall contain the name and address of the surety, as applicable, with which the employer has secured payment of compensation. Such notice shall also be readily available on the site where logging operations are occurring, and available for inspection by Division officials upon request. (6-30-19)T

e. Every employer shall do all other things as required by these rules to protect the life and safety of employees. (6-30-19)T

f. No employer shall require any employee to go or be in any place of employment that does not meet the minimum safety requirement of these rules, except for the purpose of meeting such requirements. (6-30-19)T

g. No employer shall fail or neglect: (6-30-19)T

- i. To make available and use safety devices and safeguards as are indicated. (6-30-19)T
 - ii. To adopt and use methods and processes adequate to render the employment and place of employment safe. (6-30-19)T
 - iii. To do all other things as required by these rules to protect the life and safety of employees. (6-30-19)T
 - h. No employer, owner or lessee of any real property shall construct or cause to be constructed any place of employment that does not meet the minimum safety requirements of these rules. (6-30-19)T
 - i. No person, employer, employee, other than an authorized person, shall do any of the following: (6-30-19)T
 - i. Remove, displace, damage, destroy or carry off any safeguard, first aid material, notice or warning, furnished for use in any employment or place of employment, or interfere in any way with the use thereof by any other person. (6-30-19)T
 - ii. Interfere with the use of any method or process adopted for the protection of any employee, including himself, in such employment or place of employment. (6-30-19)T
 - iii. No person shall fail or neglect to do all other things as required by these rules to protect the life and safety of employees. (6-30-19)T
 - iv. The use of intoxicants or drugs while on duty is prohibited. Persons reporting for duty while under the influence of or impaired by liquor or other legal or illegal drugs or substances shall not work until completely recovered. (6-30-19)T
 - j. A procedure for checking the welfare of all workers during working hours shall be instituted and all workmen so advised. The employer shall assume responsibility of work assignments so that no worker shall be required to work in a position or location so isolated or hazardous that he is not within visual or audible signal contact with another person who can render assistance in case of emergency. In any operation where cutting, yarding, loading, or a combination of these activities are carried on there shall be a minimum crew of two (2) persons who shall work as a team, and shall be in visual or audible signal contact with one another. This does not apply to operators of motorized equipment, watchmen, or certain other jobs which, by their nature are singular workmen assignments. There shall be some method of checking-in men crew members at the end of the shift. Each immediate supervisor shall be responsible for his crew being accounted for. This standard also includes operators of movable equipment. (6-30-19)T()
 - k. Every employer shall keep a record of all cases of injuries his employees receive at their work. This record shall be kept in such manner as to enable representatives of the Division to determine by examining the record, the injury rate of the employee force for the period covered by the report. (6-30-19)T
 - l. Every employer shall investigate every accident resulting in a disabling injury that his employees suffer in connection with their employment. Employers shall promptly take any required action to correct the situation. Employees shall assist in the investigation by giving any information and facts they have concerning the accident. (6-30-19)T
- 02. Management Responsibility.** (6-30-19)T
- a. Management shall take an active and interested part in the development and guidance of the operation's safety program, including fire safety. (6-30-19)T
 - b. Management shall apply a basic workable safety plan on the same priority as it does to any other work facet of the operation where elimination of all injuries is to be achieved in all phases of the operation. It is the duty of management to assume full and definite responsibility. To attain these safety objectives, management shall

have the full cooperation of employers and the Division. (6-30-19)T

c. Every employer shall furnish employment which shall be safe for the employees therein and shall furnish such devices and safeguards and shall adopt and use such practices, means, methods, operation and processes as are adequate to render such employment and places of employment safe to protect the life and safety of employees. The employer shall make available necessary personal protective safety equipment. (6-30-19)T

d. Regular safety inspection of all rigging, logging, machinery, rolling stock, bridges, and other equipment shall be made as often as the character of the equipment requires. Defective equipment or unsafe conditions found shall be replaced, repaired or remedied. (6-30-19)T

e. All places of employment shall be inspected by a qualified person or persons as often as the type of operation or the character of the equipment requires. Defective equipment or unsafe conditions found by these inspections shall be replaced or repaired or remedied promptly. (6-30-19)T

013. EMPLOYEE'S RESPONSIBILITY.

01. General Requirements. (6-30-19)T

a. Employees shall not indulge in horseplay, scuffling, practical jokes or any activity that creates or constitutes a hazard while on the employer's property or at any time when being transported from or to work in facilities furnished by the employer. (6-30-19)T

b. Employees who are assigned to, or engaged in the operation of any machinery or equipment, shall ensure that all guards, hoods, safety devices, etc., that are provided by the employer are in proper place and properly adjusted. (6-30-19)T

02. Employee Accidents. Each employee shall make it his individual responsibility to keep himself, his coworkers, and his machine or equipment free from accidents to the best of his ability. (6-30-19)T

03. Study Requirements. So that each worker may be better qualified to cooperate with his fellow workmen in preventing accidents, he shall study and observe these and any other safety standards governing his work. (6-30-19)T

04. Employee Responsibilities. Additional responsibilities of an employee insofar as industrial safety is concerned shall be as follows: (6-30-19)T

a. The employee shall report immediately, preferably in writing, to his foreman or safety *committee member in his department of* coordinator for the *plant* logging operation, all known unsafe conditions and practices. ~~(6-30-19)T~~ ()

b. The employee shall ascertain from the foreman where medical help may be obtained if it is needed. (6-30-19)T

c. The employee shall not participate in practical jokes or horseplay. (6-30-19)T

d. The employee shall make a prompt report of every accident regardless of severity to the foreman, first aid attendant, or person in charge. Such reports are required and are necessary in order that there may be a record of his injuries. (6-30-19)T

e. The employee shall at all times apply the principles of accident prevention in his daily work and shall use proper safety devices and protective equipment. No employee shall remove, displace, damage, destroy, or carry off any safety device or safeguard furnished and provided for use in any employment, or interfere in any way with the use thereof by any other person, or interfere with the use of any method or process adopted for the protection of any employee in such employment, or fail or neglect to do every other thing reasonably necessary to protect the life and safety of himself and fellow employees, and by observing safe practice rules shall set a good example for his fellow workmen. (6-30-19)T

- f. The employee shall not report to the job impaired by intoxicants or legal or illegal drugs and shall not use intoxicants or such drugs while on the job. The employer shall prohibit any employee from working on or being in the vicinity of any job while under the influence of or impaired by intoxicants or drugs. Employers shall be responsible for the actions of any employee known to be in an intoxicated or impaired condition while on the job. (6-30-19)T
- g. The employee shall wear, use and properly care for personal protective safety equipment issued to him. These items shall be returned to the employer upon termination of employment. (6-30-19)T
- h. Workers exposed to head hazards shall wear approved head protection. (6-30-19)T
- i. Proper eye protection shall be worn while performing work where a known eye hazard exists. (6-30-19)T
- j. The employee should consider the benefits of accident prevention to himself and to his job. (6-30-19)T
- k. The employee should make an effort to understand his job. (6-30-19)T
- l. The employee should anticipate every way in which a person might be injured on the job, and conduct the work to avoid accidents. (6-30-19)T
- m. The employee should be on the alert constantly for any unsafe condition or practice. (6-30-19)T
- n. The employee shall learn first aid. (6-30-19)T
- o. The employee should keep physically fit, and obtain sufficient rest. (6-30-19)T
- p. The employee should be certain that all instructions received are understood completely before starting the work. (6-30-19)T
- q. The employee should actively participate in safety programs. (6-30-19)T
- r. The employee should study the safety educational material posted on the bulletin boards and distributed by the employer or safety committee. (6-30-19)T
- s. The employee should advise inexperienced fellow-employees of safe ways to perform their work and warn them of dangers to be guarded against. (6-30-19)T
- t. It is the employer's responsibility to ensure compliance with the foregoing provisions. (6-30-19)T

014. --050. (RESERVED)

SUBCHAPTER B - HEALTH, SAFETY, AND SANITATION
(Rules 051 through 100)

051. FIRST AID.

01. **Transportation.** (6-30-19)T
- a. Suitable means of transportation shall be established and maintained at the site of all operations to be used in the event any employee is seriously injured. (6-30-19)T
- b. Transportation shall be of a nature to render reasonable comfort to an injured employee. (6-30-19)T

c. Each crew bus, or similar vehicle, shall be equipped with at least one (1) first aid kit with the required contents as indicated in Subsection 010.06 of these rules. (6-30-19)T

02. Communication. (6-30-19)T

a. Every employer shall arrange suitable telephone or radio communication at the nearest reasonable point, and shall establish an emergency action plan to be taken in the event of serious injury to any employee. (6-30-19)T

b. Instructions covering the emergency action plan shall be made available to all work crews. (6-30-19)T

c. When practicable, a poster shall be displayed on, or near the cover of each first aid cabinet or phone. The poster shall display the phone numbers of applicable emergency services. The use of the Idaho State EMS Communication Center is recommended. The number is 1-800-632-8000 or 208-846-7610. (6-30-19)T

d. Every employer shall obtain their specific job location (longitude and latitude preferred) and furnish such to crew for emergency evacuation. (6-30-19)T

03. Attendance for Seriously Injured. (6-30-19)T

a. Seriously injured employees shall, at all times, be attended by the most qualified available person to care for the injured employees. (6-30-19)T

b. Seriously injured employees shall be carefully handled and removed to a hospital, or given medical attention as soon as possible. (6-30-19)T

c. Caution shall be used in removing a helpless or unconscious person from the scene of an accident to prevent further injury. (6-30-19)T

04. First Aid Training. ~~All woods workers~~ Any person performing work associated with a logging operation shall be required to complete an approved course in first-aid and have a current card. ~~(6-30-19)T~~ ()

05. Stretcher or Spine Board. A spine board (designed for or adaptable to the work location and terrain) and two blankets maintained in sanitary and serviceable condition shall be available where such conditions require the use of such to provide for the proper transportation and first aid to an injured workman. (6-30-19)T

06. First Aid Kits. (6-30-19)T

a. The employer shall provide first aid kits at each work site where trees are being felled, at each active landing, and in each employee transport vehicle. (6-30-19)T

b. The following list sets forth the minimally acceptable number and type of first-aid supplies for required first-aid kits. The contents of the first-aid kits shall be adequate for small work sites, consisting of approximately two (2) to three (3) employees. When larger operations or multiple operations are being conducted at the same location, additional first-aid kits shall be provided at the work site or additional quantities of supplies shall be included in the first-aid kits:

TABLE 010.06 REQUIRED CONTENTS	
1.	Gauze pads (at least 4 x 4 inches)
2.	Two (2) large gauze pads (at least 8 x 10 inches)
3.	Box adhesive bandages (band-aids)
4.	One (1) package gauze roller bandage (at least two (2) inches wide)

TABLE 010.06 REQUIRED CONTENTS	
5.	Two (2) triangular bandages
6.	Wound cleaning agent such as sealed moistened towelettes
7.	Scissors
8.	At least one (1) blanket
9.	Tweezers
10.	Adhesive tape
11.	Latex gloves
12.	Resuscitation equipment such as resuscitation bag, airway, or pocket mask
13.	Two (2) elastic wraps
14.	Splint
15.	Directions for requesting emergency assistance

(6-30-19)T

c. Special kits, or the equivalent, shall be provided and approved for special hazards peculiar to any given work location. (6-30-19)T

d. All kits, as applicable, shall be readily available and kept supplied. (6-30-19)T

e. First aid kits shall be in metal, or other sanitary containers. Such containers shall be designed and constructed so as to be impervious to conditions of weather, dust, dirt, or other foreign matter. (6-30-19)T

052. SAFETY EQUIPMENT AND PERSONAL PROTECTIVE EQUIPMENT.

01. General Requirements. (6-30-19)T

a. Special protective equipment or apparel required for safe employment, other than clothing or equipment customarily supplied by employees, shall be furnished by the employer where necessary for the safety of employees. (6-30-19)T

b. Employees are required to utilize all prescribed safety equipment and special protective equipment or apparel, and they shall exercise due care in maintaining it in safe, efficient and sanitary conditions. (6-30-19)T

c. Employers are required to provide, at no cost to employees, appropriate eye, face, head, hand, and leg protection. ()

d. Defective safety equipment shall not be used. Where the need for their use is indicated, protective covering, ointments, gloves or other effective protection shall be provided for and used by persons exposed to materials that are irritating to the skin. (6-30-19)T

02. Inspection, Maintenance and Sanitizing. (6-30-19)T

a. Each employer shall maintain a regular system of inspection and maintenance of personal protective equipment furnished to workers. (6-30-19)T

b. Air line equipment shall have a necessary regulator and shall be inspected before each use. (6-30-19)T

c. Workers shall check their equipment at the beginning of each shift. (6-30-19)T

03. Eye Protection. (6-30-19)T

a. Where workers are subject to eye hazards (flying particles, dusts, hazardous liquids, gases, mists or vapors, or injurious light rays) they shall be furnished with and shall wear eye protection suitable for the hazards involved. Such eye protection shall conform to the American National Standard Institute standards for Head, Eyes and Respiratory protection. (6-30-19)T

b. Face shields may be used in lieu of other forms of eye protection where the nature of the operation is such that they will furnish equivalent protection. (6-30-19)T

c. Clean water in ample quantities shall be immediately available where materials are handled that are caustic or corrosive to the eyes. (6-30-19)T

04. Foot and Leg Protection. (6-30-19)T

a. Employees shall wear footwear suitable for the work conditions. (6-30-19)T

b. Employees shall wear sharp caulk-soled boots or other footwear which will afford maximum protection from slipping. (6-30-19)T

c. Special types or designs of shoes, or foot guards, shall be required to be worn where conditions exist that make their use necessary for the safety of the workers. (6-30-19)T

d. Leggings or high boots of leather, rubber or other suitable material shall be worn by climbers, persons exposed to hot substances, or caustic solutions, etc., or where poisonous snakes may be encountered. (6-30-19)T

e. ~~Each~~ ~~Employees~~ ~~whose duties require them to~~ operate a chain saw shall wear ~~ballistic nylon or equivalent leg~~ protection, ~~which meets the requirements of ASTM F 1897 and covers the full length of the each leg from upper thigh to boot the top of the boot on each leg,~~ except when working as a climber ~~or working from a bucket truck.~~ (6-30-19)T()

05. Hand Protection. (6-30-19)T

a. Hand protection suitable for the required usage shall be worn wherever the nature of the work requires extra protection for the hands. (6-30-19)T

b. Gloves shall not be worn where their use would create a hazard. (6-30-19)T

06. Head Protection. (6-30-19)T

a. Persons required to work where falling or flying objects, overhead structures, exposed electrical conductors, equipment or material create a hazard shall wear approved safety hard hats or caps at all times while exposed to such hazards. (6-30-19)T

b. Employees working in locations which present a catching or fire hazard to hair shall wear caps or other head protection that completely covers the hair. (6-30-19)T

07. Life Jackets, Vests and Life Rings.

Where personal buoyancy equipment is provided, it shall be of a design and shall be worn in a manner that will maintain the wearer's face above water. It shall be capable of floating a sixteen (16) pound weight for three (3) hours in fresh water. Such equipment shall not be dependent upon manual or mechanical manipulation or chemical action to secure the buoyant effect. (6-30-19)T

a. Employees shall be provided with, and shall wear, approved buoyant protective equipment at all times while working on or over water, as follows: (6-30-19)T

- i. On floating pontoons, rafts and floating stages. (6-30-19)T
- ii. On open decks of floating plants (such as dredges, pile-drivers, cranes, pond saws, and similar types of equipment) which are not equipped with bulwarks, guardrails or life lines. (6-30-19)T
- iii. During the construction, alteration or repair of structures extending over or adjacent to water, except when guardrails, safety nets, or safety belts and life lines are provided and used. (6-30-19)T
- iv. Working alone at night where there are potential drowning hazards regardless of other safeguards provided. (6-30-19)T
- v. On floating logs, boom sticks or unguarded walkways. (6-30-19)T
- b.** Life rings with sufficient line attached to meet conditions shall be located at convenient points along exposed sides of work areas adjacent to water. Such rings, if used at night where a person might be beyond illuminated areas, shall be provided with a means of rendering them visible.

NOTE: Consult U.S. Coast Guard requirements for operations in navigable waters. (6-30-19)T

08. Life Lines -- Safety Belts. (6-30-19)T

- a.** Each life line and safety belt shall be of sufficient strength to support, without breaking, a weight of two thousand five hundred (2,500) pounds. (6-30-19)T
- b.** All life lines and safety belts shall be periodically inspected by the supervisor in charge. Employees shall inspect their belts and lines daily. Any defective belts or life lines shall be discarded or repaired before use. (6-30-19)T
- c.** Life lines shall be safely secured to strong stable supports and maintained with minimum slack. (6-30-19)T

09. Work Clothing. (6-30-19)T

- a.** Clothing shall be worn which is appropriate to work performed and conditions encountered. (6-30-19)T
- b.** Loose sleeves, cuffs or other loose or ragged clothing shall not be worn near moving machinery. (6-30-19)T
- c.** Clothing saturated or impregnated with flammable liquids, corrosive substances, irritants or oxidizing agents shall be removed immediately and not worn again until properly cleaned. (6-30-19)T
- d.** When it is necessary for workers to wear aprons or similar clothing near moving machines or hazardous materials, such clothing shall be so arranged that it can be instantly removed. (6-30-19)T
- e.** Clothing with exposed metal buttons, metal visors or other conductive materials shall not be worn around exposed electrical conductors. (6-30-19)T

10. Respiratory Equipment. (6-30-19)T

- a.** When filter or cartridge-type respirators are required to be used regularly, each employee shall have one such respirator for his own exclusive use. (6-30-19)T
- b.** Employers and employees shall familiarize themselves with the use, sanitary care and limitations of such respiratory equipment as they may have occasion to use. (6-30-19)T

c. Whenever practical, harmful dusts, fumes, mists, vapors and gases shall be suppressed by water, oil or other means which will minimize harmful exposure and permit employees to work without the use of respiratory equipment. (6-30-19)T

d. Whenever compressed air from an oil-lubricated compressor is used to supply respiratory equipment, a filter shall be inserted in the supply line to remove any oil, sediment or condensation that it may contain. Such filter shall be maintained in efficient working condition. (6-30-19)T

e. When self-contained respiratory equipment is used in hazardous locations, a standby unit shall be maintained for rescue purposes. (6-30-19)T

11. Hearing Protection. Where workers are subject to hazardous noise levels, they shall be furnished with and shall wear hearing protection suitable for the level of hazard involved. (6-30-19)T

12. Additional Information and Requirements. Additional information and requirements for the use of safety equipment and personal protective equipment may be found in the Safety and Health Standards established in IDAPA 07.09.01, "Safety and Health Rules for Places of Public Employment." (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

152. SIGNALING.

01. One Worker to Give Signals. (6-30-19)T

a. The Worker sending drag shall be the only one to give signals. (6-30-19)T

b. Any person is authorized to give a stop signal when a worker is in danger or other emergency conditions are apparent. (6-30-19)T

02. Signal Must Be Clear and Distinct. (6-30-19)T

a. Machine operators shall not move any line unless the signal received is clear and distinct. (6-30-19)T

b. If in doubt the operator shall repeat the signal as understood and wait for confirmation. (6-30-19)T

03. Hand Signal Use Restricted. (6-30-19)T

a. Hand signals are permitted only when in plain sight of the operator. (6-30-19)T

b. Hand signals may be used at any time as an emergency stop signal. (6-30-19)T

04. Persons in Clear Before Signal Given. All persons shall be in the clear before a signal is given to move logs or turns. (6-30-19)T

05. Throwing Material Prohibited. Throwing of any type of material as a signal is prohibited. (6-30-19)T

~~**06. Use of Jerk Wire Prohibited.** The use of a jerk wire whistle system for any type of yarding operations is prohibited. (6-30-19)T~~

07. Audible Signaling to Be Installed and Used. A whistle, horn or other audible signaling device, clearly audible to all persons in the affected area, shall be installed and used on all machines operating as yarders. (6-30-19)T

07. Audible Signaling Device at the Machine to Be Activated. When radio or other means of signal transmission is used, an audible signal must be activated at the machine. (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

301. FALLING AND BUCKING.

01. General Requirements. (6-30-19)T

a. There shall be an established method of checking-in workers from the woods. Each supervisor shall be responsible for their crew being accounted for at the end of each shift. (6-30-19)T

b. Cutters not in sight of another employee shall have radio communications with crew members on that job site. (6-30-19)T

c. Common sense and good judgment must govern the safety of cutters as effected by weather conditions. At no time shall they work if wind is strong enough to prevent the falling of trees in the desired direction, or when vision is impaired by weather conditions or darkness. (6-30-19)T

d. All cutters shall have a current first aid certification. Employers shall provide an opportunity for cutters to take a standard first aid course. (6-30-19)T

e. Tools of cutters such as axes, sledges, wedges, saws, etc., must be maintained in safe condition. Battered sledges, and wedges shall not be used. When power saws are used, wedges shall be made of soft material, such as wood or plastic. (6-30-19)T

f. Cutters shall not be placed on hillsides immediately below each other or below other operations where there is possible danger. (6-30-19)T

g. Trees shall not be felled if a falling tree endangers any worker, line, or any unit in operation. (6-30-19)T

h. Before starting to fall or buck any tree or snag, the cutter must survey the area for possible hazards and proceed according to safe practices. Snags, which are unsafe to cut, shall be blown down with explosives, or felled by other methods. (6-30-19)T

i. Dangerous or hazardous snags shall be felled prior to or in the course of cutting a strip. No danger tree shall be felled by one (1) cutter where and when the assistance of a fellow employee is necessary to minimize the danger or hazards involved. In the case that any danger tree or snag cannot be safely felled and must remain standing or unattended, such tree or snag shall be clearly identified and suitably marked, including all surrounding impact area, and the employee's supervisor shall be notified as soon as possible. (6-30-19)T

j. In falling timber, adjacent brush and snow shall be cleared away from and around the tree to be felled to provide sufficient room to use saws and axes and provide an adequate escape path. (6-30-19)T

k. Cutters shall not fall into another strip; leaners on the line shall be traded. Trees shall be felled into the open whenever conditions permit. (6-30-19)T

l. Undercuts and side cuts shall be large enough to safely guide the trees and eliminate the possibility of splitting and barber chairing. Particular care shall be taken to hold enough wood to prevent the tree from prematurely slipping or twisting from the stump. Undercuts shall be cleaned out to the full depth of the saw cut. Especially large undercuts are necessary in heavy leaners. When required to safely fell a tree, mechanical or other means shall be employed to accomplish this objective. Pre-cutting of trees for the purpose of production logging is prohibited.

NOTE: Trees with no perceptible lean having an undercut to a depth of one quarter (1/4) of the diameter of the tree with an undercut height equal to one fifth (1/5) of the diameter of the tree will be assumed to be in reasonable

- compliance with this rule. (6-30-19)T
- m. Back-cuts shall be above the level of the upper horizontal cut of the undercut. (6-30-19)T
 - n. While wedging, fallers shall watch for limbs or other material which might be jarred loose. Cutting of holding wood in lieu of using wedges is prohibited. (6-30-19)T
 - o. When falling or bucking a tree is completed the power saw motor should be stopped. The power saw motor shall be stopped while the operator is traveling to the next tree. (6-30-19)T
 - p. Cutters shall not work on the downhill side of the log being bucked unless absolutely unavoidable and only when the log is blocked or otherwise secured to prevent rolling when cut is completed. (6-30-19)T
 - q. Cutters must give timely warning to all persons within range of any log which may have a tendency to roll or slide after being cut off. (6-30-19)T
 - r. Logs shall be completely bucked-through whenever possible. If it becomes hazardous to complete a cut, then the log shall be marked and identified by a predetermined method. Rigging crews shall be instructed to recognize such marks and when possible cutters shall warn rigging crew of locations where such unfinished cuts remain. (6-30-19)T
 - s. A competent person properly experienced in this type of work shall be placed in charge of falling and bucking operations. Inexperienced workers shall not be allowed to fall timber or buck logs unless under the direction of experienced workers. (6-30-19)T
 - t. Power saws shall be kept in good repair at all times. All exhaust parts on power chain saws shall be constructed and maintained so the operator is exposed to a minimum amount of fumes and noise. (6-30-19)T
 - u. Combustion engine driven power saws shall be equipped with an automatic throttle which will return the motor to idling speed upon release of the throttle. (6-30-19)T
 - v. Power saw motors shall be stopped while being fueled. (6-30-19)T
 - w. All personnel shall wear approved head protection, proper clothing and footwear. (6-30-19)T
 - x. ~~Each E~~mployees, whose ~~normal duties require them to~~ operates a chain saw, shall wear ~~ballistic nylon or equivalent~~ leg protection, which meets the requirements of ASTM F 1897 and coverings ~~each leg from upper the full length of the~~ thigh to the top of the boot ~~top~~ on each leg, except when working as a climber ~~or working from a bucket truck.~~ (6-30-19)T()

(BREAK IN CONTINUITY OF SECTIONS)

351. RIGGING.

- 01. **General.** The determining factor in rigging-up shall be the amount of rated stump pull which a machine can deliver on each line. (6-30-19)T
- 02. **Equipment Classification.** (6-30-19)T
 - a. Equipment shall be classed according to the manufacturer's rating. (6-30-19)T
 - b. Where lower gear ratios or other devices are installed to increase the power of equipment, the size of the rigging shall be increased proportionately so that it will safely withstand the increased strains to conform to Subsection 010.04 of these rules. (6-30-19)T

- 03. Safe Loading.** Rigging, and all parts thereof, shall be of a design and application to safely withstand all expected or potential loading to which it will be subjected. (6-30-19)T
- 04. Allowable Loading or Stress.** (6-30-19)T
- a.** In no case shall the allowable loading or stress be imposed on one half (1/2) of the rated breaking strength of any parts of the rigging. (6-30-19)T
- b.** This shall not be construed as applying to chokers. (6-30-19)T
- 05. Chokers.** Chokers shall be at least one eighth (1/8) inch smaller than the mainline. (6-30-19)T
- 06. Placing, Condition, and Operation of Rigging.** The placing, condition and operation of rigging shall be such as to ensure safety to those who will be working in the vicinity. (6-30-19)T
- 07. Arrangement and Operation.** Rigging shall be arranged and operated so that rigging or loads will not pound, rub, or saw against lines, straps, blocks, or other equipment. (6-30-19)T
- 08. Line Hazards.** (6-30-19)T
- a.** Running lines and changed settings shall be made in a way to avoid bight of line hazards. (6-30-19)T
- b.** Signals to operator shall be made before moving lines. (6-30-19)T
- 09. Reefing.** Reefing or similar practices to increase line pull shall be prohibited. (6-30-19)T
- 10. Inspection of Rigging.** (6-30-19)T
- a.** A thorough inspection, by the operator or qualified person, of all blocks, straps, guylines, and other rigging shall be made before ~~they are~~ the rigging is placed in position for use and subsequently repeated every thirty (30) days for as long as the rigging is in position for use. Each rigging inspection shall be documented and kept onsite for review. (6-30-19)T()
- b.** This inspection shall include an examination for damaged, cracked or worn parts, loose nuts and bolts, lubrication, condition of straps and guylines. (6-30-19)T
- c.** The repairs or replacements necessary for safe operation shall be made before rigging is used. (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

353. LINES, SHACKLES AND BLOCKS.

- 01. General Requirements.** (6-30-19)T
- a.** All lines, shackles, blocks, etc., should be maintained in good condition and shall be of sufficient size, diameter and material to withstand one and one half (1 1/2) times the maximum stress imposed. (6-30-19)T
- b.** Wire rope or other rigging equipment which shows a fifteen percent (15%) reduction in strength shall be replaced. (6-30-19)T
- 02. Splices.** (6-30-19)T
- a.** Two (2) lines may be connected by a long splice, or by shackles of patent links of the next size

larger than the line where practical.

(6-30-19)T

- b. A safe margin of line must be used for making long splices. See Table 012.02-A.

TABLE 012.02-A		
Rope Diameter	Unraveled	Total Length
3/8"	8'	16'
5/8"	13'	20'
3/4"	15'	30'
7/8"	18'	36'
1"	20'	40'

(6-30-19)T

03. Wire Rope Clips or Clamps.

~~(6-30-19)T()~~

- a. Clips should be spaced at least six (6) rope diameters apart to achieve maximum holding power. See Table 012.03-A

TABLE 012.03-A		
Diameter of Rope	Number of Clips	Required Space Between Clips
1-1/2-inch	8	10 inches
1-3/8-inch	7	9 inches
1-1/4-inch	6	8 inches
1-1/8-inch	5	7 inches
1- inch	5	6 inches
7/8-inch	5	5-1/4 inches
3/4-inch	5	5-1/2 inches
3/8 to 5/8-inch	4	3 inches

(6-30-19)T

- b. Clips should always be attached with the base or saddle of the clip against the longer or “live” end of the rope. See Figure 012.03-A. This is the only approved method.

FIGURE 012.03-A



(6-30-19)T

c. Do not reverse the clips or stagger them. See Figure 012.03-B. Otherwise the “U” bolt will cut into the live rope when the load is applied.

FIGURE 012.03-B



(6-30-19)T

d. After the rope has been used and is under tension, the clips should again be tightened to take up any looseness caused by the tension reducing the rope diameter. Remember that even when properly applied a clip fastening has only about ninety percent (90%) of the strength of the rope and far less than that when rigged improperly. (6-30-19)T

e. U-bolt wire rope clamps must not be used to form eyes on running lines, skylines, machine guylines, or straps. ()

04. **Blocks.** All blocks must be of steel construction or of material of equal or greater strength and so hung that they will not strike or interfere with other blocks or rigging. (6-30-19)T

05. **Pins.** All pins in blocks shall be properly secured by keys of the largest size the pin hole will accommodate (6-30-19)T

06. **Shackles.** (6-30-19)T

a. Spread in jaws of shackles shall not exceed by more than one (1) inch the size of yoke or swivel of the block to which it is connected. (6-30-19)T

b. All shackles must be made of forged steel or material of equivalent strength and one (1) size larger than the line it connects. (6-30-19)T

07. **Cable Cutting.** Cable cutters, soft hammers, or a cutting torch shall be available and *shall be* used for cutting cables. Eye protection must be used when cutting cable. (6-30-19)T()

08. **Damaged or Worn Wire Rope.** Worn or damaged wire rope creating a safety hazard shall be taken out of service or properly repaired before further use. (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

402. TRACTORS AND SIMILAR LOGGING EQUIPMENT.

01. Operating Condition.

a. The general operating condition of a tractor or equipment shall be sufficient to ensure the safety of the driver and other workmen. (6-30-19)T

b. An operating manual shall be readily available in either print or electronic format for each piece of machinery. ()

02. **Guards.** All guards shall be kept in place and in good repair at all times when the tractor or similar equipment is used. (6-30-19)T

03. **Repairs or Adjustments.** Repairs or adjustments to clutches, frictions, or other parts of equipment which may cause hazardous movement of equipment shall not be done while engines are running. (6-30-19)T

04. Blades or Similar Equipment. (6-30-19)T

a. Blades or similar equipment shall be blocked or otherwise securely supported when making repairs or performing other work around such equipment when they are elevated from the ground. (6-30-19)T

b. Equipment under repair or adjustment should be tagged out. (6-30-19)T

05. Brakes and Steering. (6-30-19)T

a. All equipment shall be equipped with a braking system capable of stopping and holding the maximum load on all grades at all times. (6-30-19)T

b. Any defect found in the braking system or steering devices of any equipment used in skidding or yarding operations shall not be used until repaired or replaced. (6-30-19)T

06. **Starting of Equipment.** Equipment shall be started (cranked) only by the operator or other experienced persons. (6-30-19)T

07. Seatbelts. (6-30-19)T

a. Seatbelts shall be installed on all tractors and mobile equipment having roll-over protection or in accordance with a design by a professional engineer which offers equivalent employee protection. (6-30-19)T

b. Seatbelts shall be used when operating any machine equipped with Roll Over Protection Structure

(ROPS), Falling Object Protection Structure (FOPS), or overhead guards. (6-30-19)T

08. Pin Connections. (6-30-19)T

a. Pin connections are recommended for joints in the structural frame and especially at connections to the tractor frame or similar equipment frame. (6-30-19)T

b. Gusset plates shall be installed at each place where individual pieces of pipe are joined. (6-30-19)T

09. Sideguards. When practical, sideguards shall be installed to protect the operator from hazards. (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

452. CABLE YARDING.

01. Safety A. Personnel shall not ride hooks, lines, rigging, or logs suspended in the air or being moved. (6-30-19)T

02. Safety B. Personnel shall not hold on to haywire, running lines, drop lines, or chokers as an assist when walking uphill. (6-30-19)T

03. Safety C. Personnel shall not work in the bight of lines under tension. (6-30-19)T

04. Safety D. Personnel shall be “in the clear” before any signal to move any lines is given. (6-30-19)T

05. Safety E. The outer swing radius of each swing yarder shall be marked with hi-vis tape or cones while the swing yarder is in operation. Tools or supplies shall not be kept inside the swing radius outside the machine cabin unless in a lockable box. No employee shall enter the swing radius without first notifying the operator. ()

(BREAK IN CONTINUITY OF SECTIONS)

454. WIRE ROPE.

01. General Characteristics. Wire rope comes in many grades and dimensions, and every rope has its own characteristics with regard to strength and resistance to crushing and fatigue. A larger rope will outlast a smaller rope of the same materials and construction, used in the same conditions, because wear occurs over a larger surface. Similarly, a stronger rope will outlast a weaker rope, because it performs at a lower percentage of its breaking strength, with reduced stress. (6-30-19)T

02. Wire Rope Terms. Common grades of wire rope include extra improved plow steel (EIPS) and swaged powerflex, among others. The following terms are commonly used for wire rope: (6-30-19)T

a. Abrasion Resistance. Ability of outer wires to resist wear. Abrasion resistance is greater with larger wires. (6-30-19)T

b. Core. The foundation of a wire rope which is made of materials that will provide support for the strands under normal bending and loading conditions. A fiber core (FC) can be natural or synthetic. If the core is steel, it can be a wire strand core (WSC) or an independent wire rope core (IWRC). (6-30-19)T

c. Crushing Resistance. Ability of the rope to resist being deformed. A rope with an independent wire core is more resistant to crushing than one with a fiber core. (6-30-19)T

d. Die-form Line. Made from strands that are first compacted by drawing them through a drawing die to reduce their diameter. The finished rope is then swaged or further compressed. (6-30-19)T

e. Fatigue Resistance. Ability of the rope to withstand repeated bending without failure (the ease of bending a rope in an arc is called its “bendability”). Fatigue resistance is greater with more wires. (6-30-19)T

f. Strength. Referred to as breaking strength, usually measured as a force in pounds or tons. The breaking strength is not the same as the load limit, which is calculated as a fraction of the breaking strength to ensure safety. (6-30-19)T

g. Swaged Line. Manufactured by running a nominal-sized line through a drawing die to flatten the outer crown and thus reduce the rope diameter. This compacted rope allows for increased drum capacity and increased line strength. (6-30-19)T

03. Typical Wire Rope Specifications. The table below lists a few examples of wire-rope breaking strengths. (6-30-19)T

TABLE 012.09-A -- Typical Wire Rope Specifications						
6x26 Improved Plow Steel			6x26 Swaged		Swaged Compact-Strand	
Diameter (inches)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)
1/2	0.46	11.5	0.6	15.2	0.63	18.6
9/16	0.59	14.5	0.75	19	0.78	23.7
5/8	0.72	17.9	0.93	23.6	1.01	28.5
11/16			1.10	28.8	1.18	35.3
3/4	1.04	25.6	1.37	34.6	1.41	42.2
13/16			1.56	39.6	1.63	49.3
7/8	1.42	34.6	1.83	46.5	1.91	56.0
15/16			1.95	53.3	2.20	66.1
1	1.85	44.9	2.42	60.6	2.53	73.7
1-1/8	2.34	56.5	2.93	75.1	2.97	92.9
1-1/4	2.89	69.3	3.52	92.8	3.83	112.1
1-3/8	3.5	83.5	4.28	108.2	4.62	128.6

TABLE 013.03-A						
6x26 Improved Plow Steel			6x26 Swaged		Swaged Compact-Strand	
Diameter (inches)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)	Weight (lbs/ft)	Breaking Strength (tons)
½	0.46	11.5	0.6	15.2	0.63	18.6
9/16	0.59	14.5	0.75	19	0.78	23.7
5/8	0.72	17.9	0.93	23.6	1.01	28.5
11/16			1.10	28.8	1.18	35.3
¾	1.04	25.6	1.37	34.6	1.41	42.2
13/16			1.56	39.6	1.63	49.3
7/8	1.42	34.6	1.83	46.5	1.91	56.0
15/16			1.95	53.3	2.20	66.1
1	1.85	44.9	2.42	60.6	2.53	73.7
1-1/8	2.34	56.5	2.93	75.1	2.97	92.9
1-1/4	2.89	69.3	3.52	92.8	3.83	112.1
1-3/8	3.5	83.5	4.28	108.2	4.62	128.6

Source: Cable Yarding Systems Handbook. 2006. Worksafe BC. Table lists typical breaking strengths. See manufacturer's specifications for specific lines. (6-30-19)T

04. Synthetic Rope. High-tensile strength synthetic lines are considerably lighter than standard wire rope; however, some lines are dimensionally as strong as standard wire rope. Accordingly, high-tensile strength synthetic lines are permitted to be used in appropriate logging applications, including as substitutes for brush straps, tree straps, tail and intermediate support guylines, guyline extensions, skyline extensions, and haywire. Manufacturers' standards and recommendations for determining usable life or criteria for retirement of such lines shall be followed. Personnel shall examine the lines for broken or abraded strands, discoloration, inconsistent diameter, glossy or glazed areas caused by compression and heat, and other inconsistencies. Rope life is affected by load history, bending, abrasion, and chemical exposure. Most petroleum products do not affect synthetic ropes. (6-30-19)T

05. Inspection and Care. (6-30-19)T

a. Wire rope shall be inspected daily by a qualified individual and repaired or taken out of service when there is evidence of any of the following conditions: (6-30-19)T

i. Twelve and five tenths percent (12.5%) of the wires are broken within a distance of one (1) lay. (6-30-19)T

ii. Evidence of chafing, sawing, crushing, kinking, crystallization, bird-caging, corrosion, heat damage, or other damage that has weakened the rope structure. (6-30-19)T

b. Qualified personnel shall closely inspect those points subject to the most wear, including the knob ends of lines, eye splices, and those sections of line that most often run through blocks or carriages. If there is doubt about the integrity of the line, it is far safer to replace a suspect line, or cut out and resplice a defective area, than risk a failure during operation. Evaluation of the load-bearing yarder lines shall be stringent. A qualified person shall also inspect all other lines used on site and remove any that are unsafe. (6-30-19)T

06. Additional Precautions. The following precautions shall also be observed: (6-30-19)T

a. Ensure the working load limit for any line is adequate for the intended use. (6-30-19)T

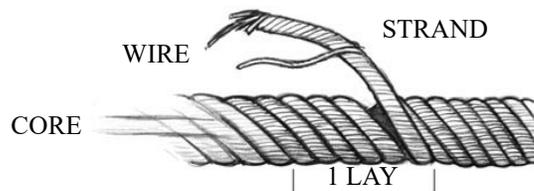
b. The manufacturer's specifications with regard to assigned breaking strength shall be followed. Such specifications as determined by engineering test results should factor the grade of the wire, number of strands, number of wires per strand, filler wire construction, lay pattern of the wires, and the diameter of the line. (6-30-19)T

07. Safety Factor. Operators shall follow the manufacturer's specifications in determining load limits. The working load limit is a fraction of a line's breaking strength – a factor of three (3), or one-third (1/3) the breaking strength, is commonly used as a safety factor for running and standing lines, when workers are not exposed to breaking lines or loads passing overhead. A safety factor of three (3) is commonly used to determine the working load limit for a standing or running line. A standard six (6) x twenty-six (26) IWRC wire rope with a diameter of one (1) inch has a breaking strength of approximately forty-five (45) tons – divide by three (3) – equals fifteen (15) tons working load limit. (6-30-19)T

08. Wire Labeling. (6-30-19)T

a. The elements of a typical wire rope are labeled, for example, six (6) x twenty-five (25) FW PRF RL EIPS IWRC. The label indicates a six (6)-strand rope with twenty-five (25) wires per strand (six (6) x twenty-five (25)), filler-wire construction (FW), strands pre-formed in a helical pattern (PRF), laid in a right-hand lay pattern (RL), using an extra-improved plow steel (EIPS) grade of wire, and strands laid around an independent wire rope core (IWRC). See figure 013.08-A for proper labeling of wire rope. (6-30-19)T

FIGURE 013.08-A



(6-30-19)T

b. Out of Service Standard Example. A six (6) x twenty-five (25) IWRC wire rope = six (6) strands in one (1) lay with twenty-five (25) wires per strand = one hundred fifty (150) wires. The rope must be taken out of service when twelve and five tenths percent (12.5%), or one-eighth (1/8), of the wires are broken within the distance of one (1) lay = one hundred fifty (150) divided by eight (8) = eighteen and seventy-five one hundredths (18.75), or nineteen (19) broken wires. (6-30-19)T

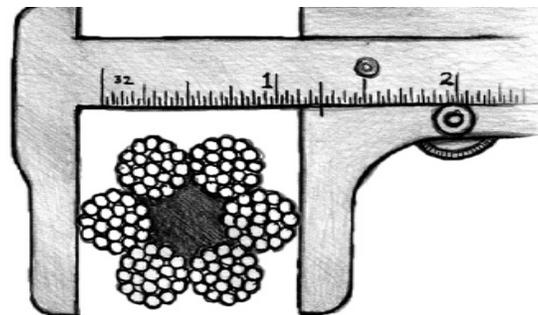
09. Wire Line Life. Table 013.08-A provides the allowable life of a line in million board feet in accordance with line size and use. Figure 013.09-A illustrates both the correct and incorrect manner in which to measure line size (diameter). (6-30-19)T

TABLE 013.08-A
LINE LIFE BY WOOD HAULED

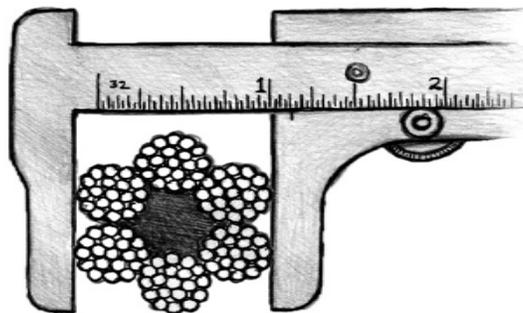
System	Use	Line Size (inches)	Line Life (million board feet)
Standing Sky-line	Skyline	1-3/4	20-25
		1-1/2	15-25
		1-3/8	8-15
	Mainline	1 to 1-1/8	15-20
		1	10-15
	Haulback	3/4 to 7/8	8-12
Live Skyline	Skyline	1-1/2	10-20
		1-3/8	8-15
		1	6-10
	Mainline	1	10-15
		3/4	8-12
		5/8	8
	Haulback	3/4 to 7/8	8-12
		1/2	6-10
	Dropline	7/16	5-8
	High Lead	Mainline	1-3/8
1-1/8			6-12

Source: Willamette Logging Specialist's Reference by Keith L McGonagill. 1976. Portland, OR: Willamette National Forest. Calculations of line life refer to EIPS 6x21 wire rope for the skyline, and EIPS 6x26 for other lines. Figures will be different for other classes of wire rope. (6-30-19)T

FIGURE 013.09-A



Correct way to measure line diameter



Incorrect way to measure line diameter

(6-30-19)T

10. Dynamic Loads. Operators shall consider high dynamic loads when calculating safe working limits of wire ropes. Wire ropes are often subjected to high dynamic loads, which greatly multiply the force on a line and may exceed the safe working limit. Even a split second of time over the limit can lead to premature failure of a line. Typical dynamic loads occur when a turn hits a stump, a turn comes down off of the back hillside to full suspension, or when excessive force is applied to pulling a turnout of its bed. A high dynamic load or a sudden shock load that exceeds the working limit may not result in immediate failure, but rope strands may stretch and weaken, and may fail at a later time. (6-30-19)T

11. Other Common Wire Rope Considerations. (6-30-19)T

a. Wire Rope Stretching and Line Diameter. A stretched wire rope has a reduced diameter. Operators shall check for stretched lines by measuring the diameter, particularly on older lines and any line used in stressful situations. (6-30-19)T

b. Older Wire Rope. Standing lines and guylines are often kept in service for multiple years (four (4) to five (5), and as long as ten (10) years in some instances) without exhibiting any obvious signs of excessive wear other than rust. Operators shall check date stamps of wire rope and evaluate line life. Operators shall also inspect the core of older lines periodically for a fractured or dry core, which could indicate other deficiencies such as broken wires, excessive wear, or line deformation. (6-30-19)T

c. Hard Use. The life of a wire rope is also affected by hard use. Line life can be measured by the volume of wood hauled (see Table 013.08-A). Line life is reduced when a line exceeds its elastic limits, is heavily shocked, or rubbed against rocks or other lines. As a line wears, the safe working load limit shall be lower and the payload adjusted appropriately. (6-30-19)T

d. Wire Rope endurance and elastic limits. Working within the endurance and elastic limits of lines

can help preserve line life. The following principles shall be observed when evaluating the integrity and safe use of wire rope: (6-30-19)T

i. The “endurance limit” for all lines is fifty percent (50%) of the breaking strength. If wire rope tensioning regularly exceeds the endurance limit, the life of the line is reduced through fatigue. (6-30-19)T

ii. The “elastic limit” for all lines is sixty to sixty-five percent (60-65%) of the breaking strength. When a wire rope is loaded to its normal safe working limit, the line stretches, but then returns to its original size when the load is released. If a load increases past the elastic limit through prolonged exertion or repeated stress, the line will stretch and stay stretched, resulting in a permanent reduction in the breaking strength. (6-30-19)T

e. **Lubrication and Abrasion.** Wire rope is lubricated in the factory to reduce internal friction and corrosion, and prolong the life of the rope. Heat from friction causes the internal lubricant to deteriorate. Friction occurs when the rope stretches under load, particularly in places where it bends around sheaves or other objects. An improperly lubricated line can pick up particles of dirt and sand that will increase abrasion. Accordingly, operators shall: (6-30-19)T

i. Check for and ensure the proper lubrication of all lines and wire rope, following the manufacturer’s instructions. Commercial wire rope lubricants are available. (6-30-19)T

ii. Carefully inspect lines for faults in areas where dust and sand may collect. (6-30-19)T

iii. Store all wire rope and lines off the ground. (6-30-19)T

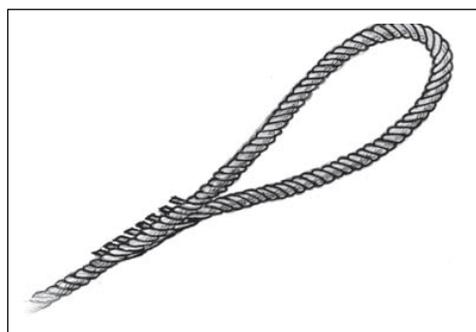
12. Line Connections. (6-30-19)T

a. **Inspection.** Operators shall regularly inspect shackles, hooks, splices, and other connecting equipment for damage and wear, as well as ensure the connectors are the correct type and size for the line and intended use. (6-30-19)T

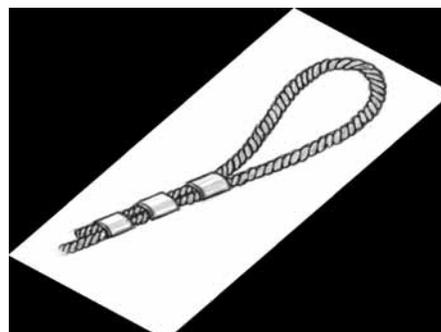
b. **Wire Splicing.** Splices are used to form an eye at the end of a line, extend the length of a line, or repair a broken or damaged line. The splicing of wire rope requires special skill and shall only be performed under the supervision of a competent person with using the proper tools. Reference materials are available with detailed instructions for numerous types of splices. Individuals splicing wire shall always wear appropriate eye protection while splicing or assisting with a splicing procedure. (6-30-19)T

c. The logger’s eye splice and three (3)-pressed eye are the most common methods to form an eye for use as a skyline terminal. See Figure 013.12-A. The spliced eye is approximately eighty percent (80%) efficient. A three (3)-pressed eye can reach ninety percent (90%) line strength. The pressed eye is typically performed at the rigging shop. Spliced eyes may be placed in the field, but may require additional time to install. (6-30-19)T

FIGURE 013.12-A



THE LOGGER’S EYE SPLICE

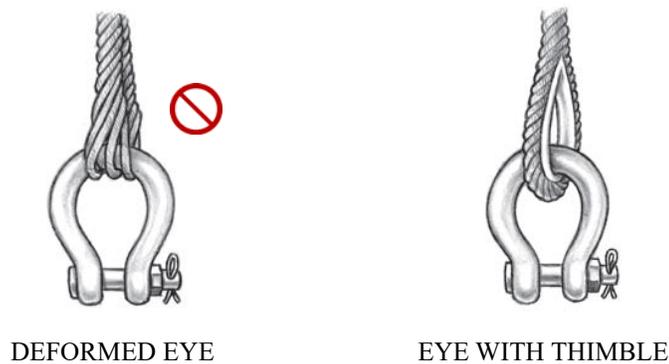


THREE-PRESSED EYE

(6-30-19)T

- d.** When Flemish (Farmes, Rolled) eye splices are used on load-bearing lines, the strand ends must be secured by: ()
- i.** Hand tucking each strand three (3) times; or ()
 - ii.** Applying a compression (pressed-eye) fitting. ()
- d.e.** Guyline Care. Guylines are a vital link in holding up a tower. Guyline extensions shall not be excessively moved around by dragging on the ground, or left on the ground for long periods of time as they will deteriorate faster. (6-30-19)T
- f.** Guyline extensions must be connected by: ()
- i.** A bell shackle using a safety pin to connect spliced eyes or pressed eyes; or ()
 - ii.** Poured nubbins (buttons) and a double-ended hook. ()
- eg.** Line Deformity. A line may deform where it loops around a shackle or pin, producing weakness that may result in line failure. A thimble in the loop protects the line. Thimbles may be used on standing lines, but not on running lines. Examples of the appearance of deformed lines and the use of thimbles in shackles are illustrated in Figure 013.12-B. (6-30-19)T

FIGURE 013.12-B



(6-30-19)T

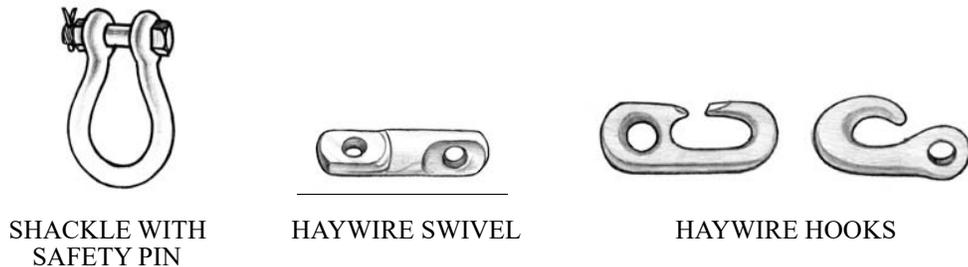
13. Shackles and Hooks.

(6-30-19)T

a. Hooks. Hooks shall be inspected to ensure that they have not sprung open. Ensure that shackles are positioned correctly to bear the load. Haywire swivels shall be inspected frequently, due to their susceptibility to wear rapidly. (6-30-19)T

b. Shackle Safety. Proper bells or shackles shall be used to connect the guylines to the stumps, and the guyline lead blocks to the ring at the top of the tower. Connections shall have at least one and a half (1-1/2) times the strength of the guyline. The pins of the shackles must be secured to protect against dislodgement, and a nut and cotter key, or a nut and molly may be used for that purpose. The use of loops or mollies to attach guylines is prohibited. Examples of the appearance of some shackle equipment is illustrated in Figure 013.13-A.

FIGURE 013.13-A



(6-30-19)T

c. The following practices shall be observed in order to ensure the safe use of shackles: (6-30-19)T

i. A shackle must have a rated breaking strength greater than the rated breaking strength of the lines attached to it, and the manufacturer's rated strengths to determine oversized requirements shall be used. Accepted industry standards shall be utilized and adhered to when determining the correct shackle size based on the type and nature of the logging operation being performed. Examples of the appearance of some shackle equipment for the purposes of proper selection is illustrated in Figure 013.13-B. (6-30-19)T

ii. Shackles with pins, and securing nuts with mollies or a cotter key shall be used on standing or overhead rigging. (6-30-19)T

iii. Screw shackle pins shall not be used in any standing or overhead rigging. (6-30-19)T

iv. Screw shackle pins, where allowed to be used, shall be tightened securely. (6-30-19)T

v. Shackle pin mollies shall be rolled sufficiently and fit the pin hole fully. Mollies shall be tucked a minimum of three (3) times. (6-30-19)T

vi. The shackle shall always be placed with the pin nearest to the yarder, so that in the event the shackle fails the least amount of hardware may be thrown at the yarder. (6-30-19)T

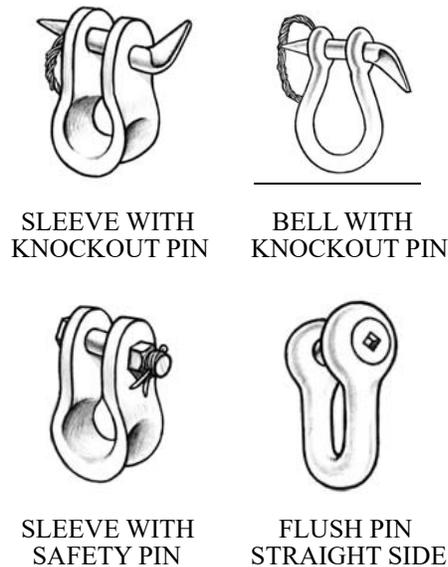
vii. Replace shackles that are bent, broken, or show excess wear on the inner surfaces. Examples of the appearance of some damaged or non-conforming shackles are illustrated in Figure 013.13-A.

FIGURE 013.13-A



REPLACE SHACKLES THAT ARE BENT, BROKEN, OR SHOW EXCESS WEAR ON THE INNER SURFACES.

FIGURE 013.13-B



(6-30-19)T

14. Knobs, Ferrules, and Eyes.

(6-30-19)T

a. Poured nubbins and a double-end hook are acceptable connectors in place of shackles in some instances. The use of quick nubbins (wedge buttons) as guylines and skyline end fittings is prohibited unless attaching guylines to guylines drums. Operators shall follow the manufacturer's recommendations when attaching sockets and similar end fastenings. (6-30-19)T

b. Poured nubbins achieve ninety-nine percent (99%) of line strength and may be used. Quick nubbins only achieve a maximum of sixty-five percent (65%) under ideal conditions, and accordingly operators shall consider whether they are appropriate for safe use in any given application. Pressed ferrule are not certifiable for strength, and shall not be used. Examples of the appearance of some knob, ferrule, and nubbin equipment are illustrated in Figure 013.14-A. (6-30-19)T

c. Operators shall inspect knobs, ferrules, and eyes at cable ends for loose or broken wires, and corroded, damaged, or improperly applied end connections. Poured nubbins shall be date stamped.

FIGURE 013.14-B



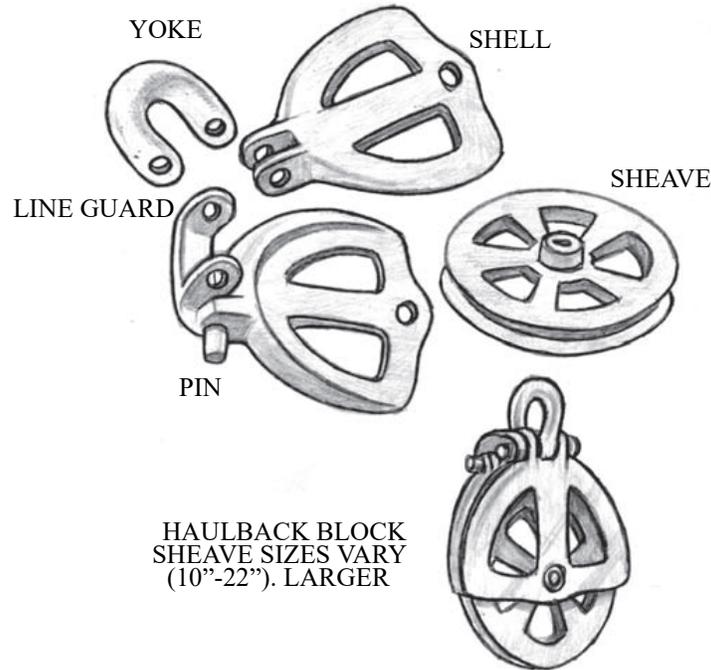
BABBITED KNOB & PRESSED FERRULE

QUICK NUBBIN (WEDGE BUTTON)

(6-30-19)T

15. **Brush Blocks.** Brush blocks shall be thoroughly inspected for cracks, wear, or deterioration. Operators shall closely examine the areas subject to the most wear, including bearings, sheave, frame, yoke, and pins. Defective parts shall be replaced immediately. Blocks shall be greased every time before each use.

FIGURE 013.15-A



(6-30-19)T

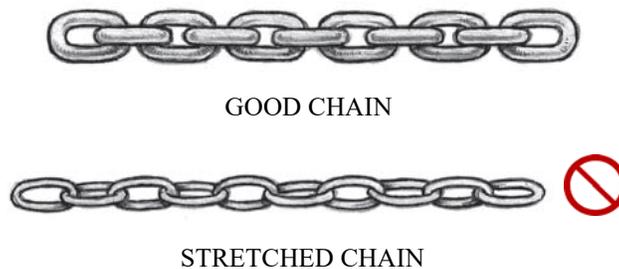
16. **Chains and Straps.** Chains or straps shall always be sized and used correctly for the intended purpose. Determining which size to use may depend on various factors. Oversized trailer lift straps, for example, shall have a breaking strength equal to five (5) times the load to be lifted. Towing chains shall have a tensile strength equivalent to the gross weight of the towed vehicle. The manufacturer's specifications or other appropriate reference materials shall always be consulted to ensure the right chain or strap is used for a task.

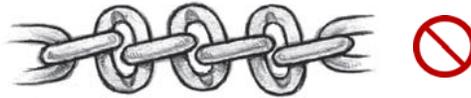
(6-30-19)T

a. Operators shall periodically inspect chains for damaged, worn, or stretched links. Chains with more than ten percent (10%) wear at the bearing surface shall be replaced. Operators shall periodically inspect straps, and examine them for broken wires or wear. Examples of the appearance of damaged and safe chains are illustrated in Figure 013.16-A.

(6-30-19)T

FIGURE 013.16-A





WORN CHAIN (INSIDE LINKS)

(6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

501. LOG TRUCK TRANSPORTATION.

01. General. The following requirements are supplemental to any Idaho law governing automobiles, trucks, tractors, trailers, and any combination of these units. If there are any discrepancies in the codes between this section and any federal or Idaho motor vehicle regulations pursuant to title 49, Idaho Code, applicable in the state of Idaho, such federal or other governmental regulations will govern. (6-30-19)T

02. Stopping and Holding Devices for Log Trucks. (6-30-19)T

a. Motor logging trucks and trailers must be equipped with brakes or other control methods which will safely stop and hold the maximum load on the maximum grade. Air or vacuum brake lines shall be of the type intended for such use and shall have fittings which will not be interchangeable with water or other lines. (6-30-19)T

b. Brake Test - A brake test shall be made before and immediately after moving a vehicle. Any defects shall be eliminated before proceeding. (6-30-19)T

03. Lighting Equipment Required. (6-30-19)T

a. Motor vehicles used on roads not under the control of the Idaho Transportation Board, counties or cities, shall have equipment necessary for safe operation, such as head, tail, and stop lights. (6-30-19)T

b. Such lights shall be used during clearance periods of reduced visibility. (6-30-19)T

04. Safe Operating Requirements. (6-30-19)T

a. The driver shall do everything reasonably possible to keep his truck under control at all times and shall not operate in excess of a speed at which he can stop the truck in one-half (1/2) the distance between him and the range of unobstructed vision. (6-30-19)T

b. The driver shall take into consideration the condition of the roadway, weather factors, curves, grades and grade crossings, the mechanical condition of his equipment, and other relevant factors. (6-30-19)T

c. The driver shall clear rocks from between dual tires before driving on multi-lane roads. (6-30-19)T

d. A daily inspection shall be made of trucks and trailers with particular attention to steering apparatus, brakes, boosters, brake hoses and connections, reaches, and couplings. Any defects found shall be corrected before equipment is used. (6-30-19)T

05. Stakes, Bunks, or Chock Blocks. All stakes and bunks, installed on log trucks and trailers, together with the means provided for securing and locking the stakes in a hauling position, shall be designed and constructed of materials of such size and dimensions that will withstand a pressure of fifteen thousand (15,000) pounds applied outward against the tops of the stakes, and, or extensions when used, without yield or permanent set resulting in the stakes, bunks or the means provided for securing and locking the stakes.

NOTE: Test Procedure - A test pressure of fifteen thousand (15,000) pounds is applied to the top of one (1) stake, using the top of the stake opposite as a base for applying pressure. Bunk is not to be secured to floor or other base except in a manner similar to that used to mount it to truck or trailer. Stakes must return to normal upright position at end of test and stakes and all component parts examined and checked with original specifications. If no yield results in any part, the design and construction may be considered as meeting code requirements. (6-30-19)T

06. Stake Extensions. (6-30-19)T

a. Stake extensions shall not be used unless all component parts of the bunking system are of sufficient size and strength to support the added stresses involved. (6-30-19)T

b. Truck drivers shall report missing or broken stake extensions to the proper authority. (6-30-19)T

07. Stake and Chock Tripping Mechanisms. Stakes and chocks that trip shall be constructed in such a manner that the tripping mechanism, which releases the stake or chocks, is activated at the opposite side of the load from the stake being tripped. (6-30-19)T

08. Linkage for Stakes or Chocks. (6-30-19)T

a. The linkage used to support the stakes or chock must be of adequate size and strength to withstand the maximum imposed impact load. (6-30-19)T

b. “Molly Hogans” or cold shuts are prohibited in chains or cable used for linkage. (6-30-19)T

09. Notify Engineer When Around Truck. (6-30-19)T

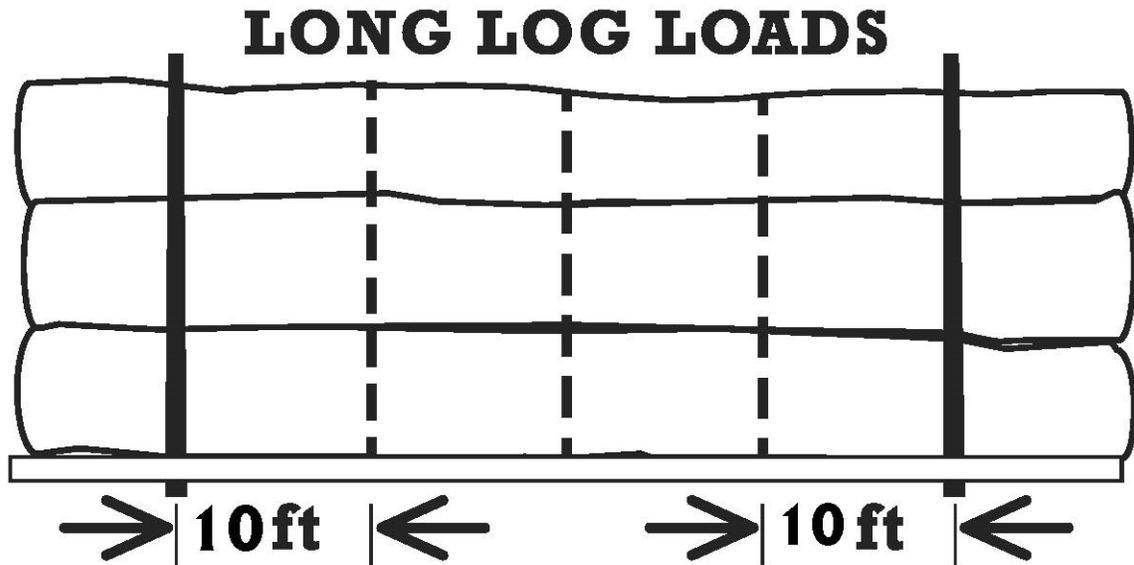
a. Persons shall not walk along side of or be underneath any truck being loaded. (6-30-19)T

b. Prior to performing any duties, such as releasing bunk locks, placing or removing compensating pin, scaling logs, reading scale, chopping limbs or making connections, persons shall notify the loading engineer of their intentions and be acknowledged. (6-30-19)T

10. Number of Wrappers Required. (6-30-19)T

a. Each unit used for hauling logs longer than twenty six (26) feet, shall have the load secured by a minimum of three (3) wrappers. Wrappers shall be placed in positions that effectively secure the load. One (1) wrapper shall be placed within ~~ten~~ (610) feet of each bunk. See Figure 010.10-A.

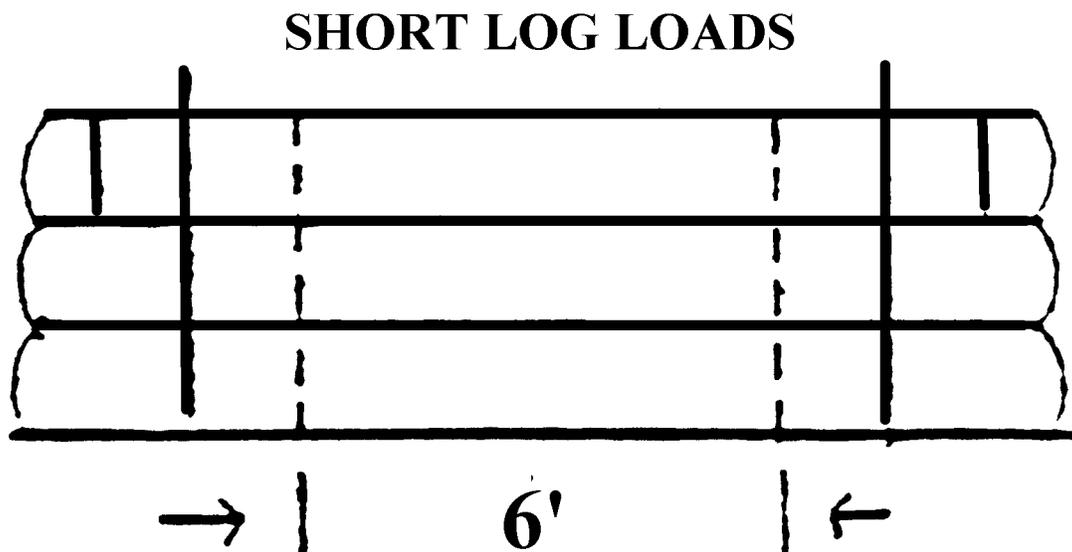
FIGURE 010.10-A



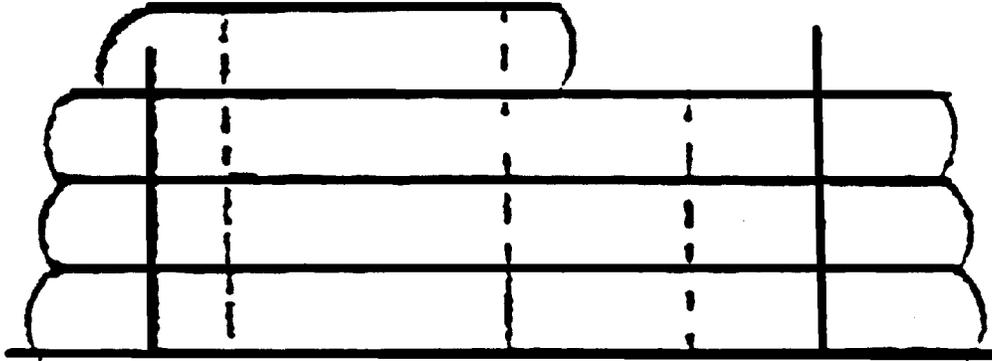
(6-30-19)T()

b. All exposed outside logs shall be secured by one (1) wrapper passing near each end of the log. See Figure 010.10-A.

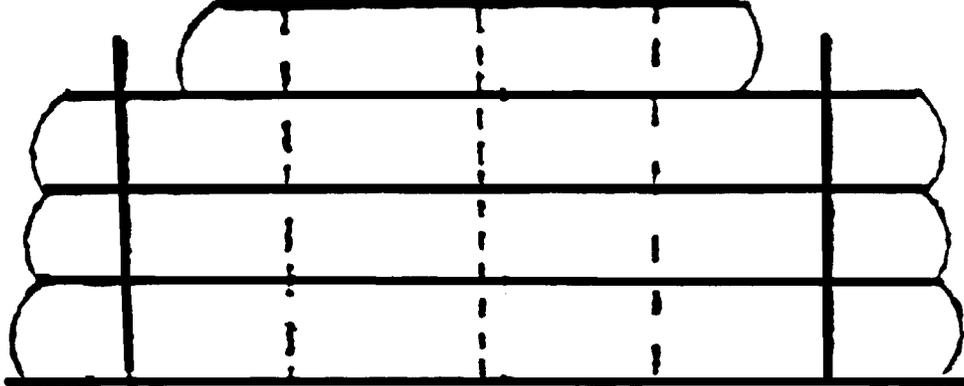
FIGURE 010.10-B



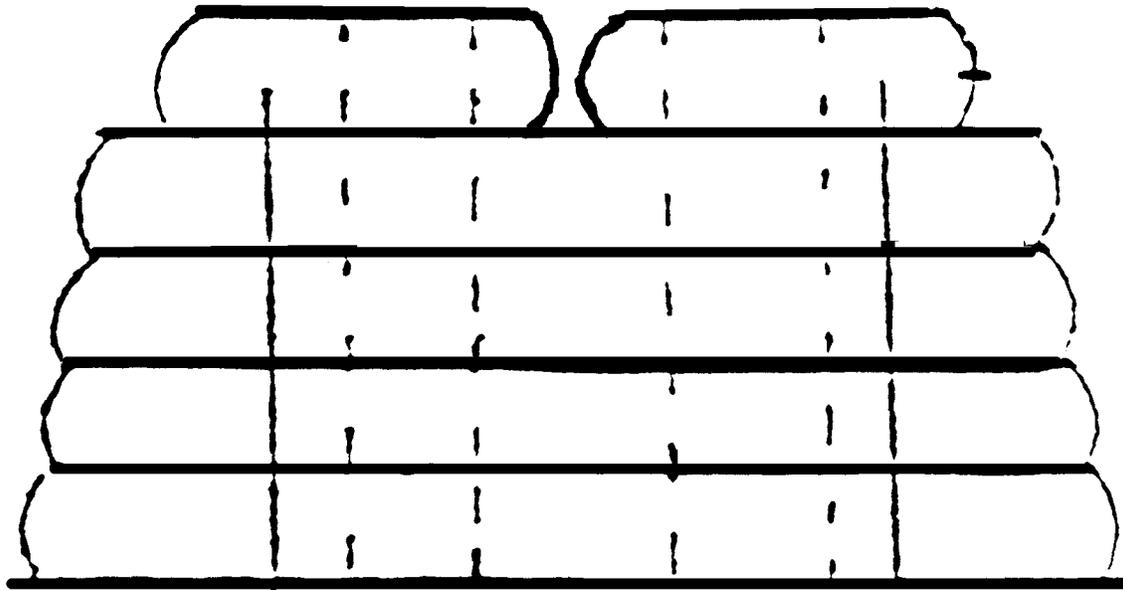
LONG LOG LOAD WITH SHORT LOGS IN REAR OR IN FRONT



LONG LOG LOAD WITH SHORT LOGS IN CENTER



LONG LOG LOAD WITH SHORT LOGS BUTTED



(6-30-19)T

c. On one (1) log load where trailer bunk is equipped with cheese blocks, one (1) wrapper securing log to the trailer bunk will be sufficient. Outside wrappers on short logs shall have a minimum of six (6) feet spread. (See Figure 010.10-C.)

NOTE: High loads are defined as logs loaded above bunk stakes.

FIGURE 010.10-C

ONE LOG LOAD



(6-30-19)T

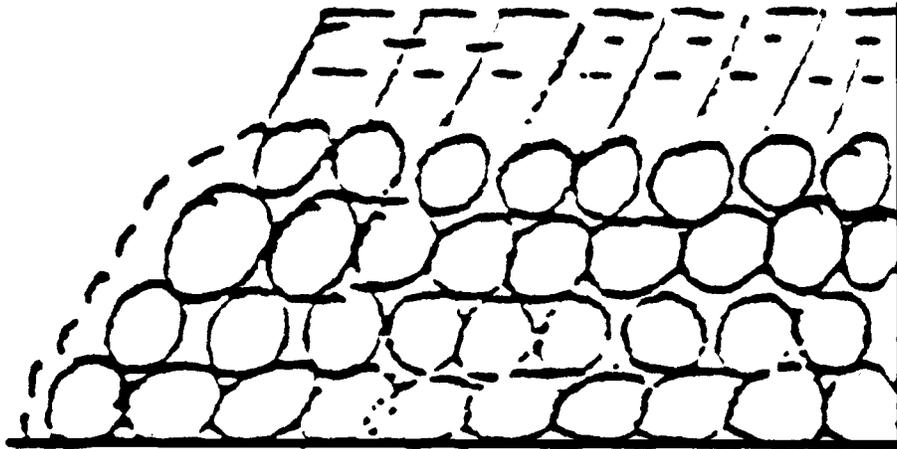
11. Requirements for Crosswise Loaded Trucks.

(6-30-19)T

- a. When loads of short logs are loaded crosswise, the logs shall be properly contained by use of stake or chock blocks and shall be secured by a minimum of two (2) wrappers. (See Figure 010.11-A.)

FIGURE 010.11-A

CROSSWISE LOADED TRUCK



- (6-30-19)T
- b. Binders shall be securely fastened to the vehicle. (6-30-19)T
12. **Construction of Wrappers and Binders.** ~~(6-30-19)T~~ ()
- a. Cables shall have a spliced eye or swaged fittings. (6-30-19)T
- b. “Molly Hogans” or cold shuts are prohibited to make splices or connections. (6-30-19)T
- c. ~~Each wrapper~~ shall have a minimum breaking strength of not less than ~~thirteen~~ fifteen thousand (13,000) pounds. ~~(6-30-19)T~~ ()
- d. Binders must be stamped with a working load limit of four thousand (4,000) pounds or greater.** ()
13. **Binder Placement Requirements.** (6-30-19)T
- a. Binders shall be placed in a manner whereby they will be released on the side opposite the brow log, or on the side where the unloading equipment operator can see the binders. (6-30-19)T
- b. Truck drivers shall be required to stop vehicles, dismount, check and tighten loose load binders, either just before or immediately after leaving a private road to enter the first public road they encounter. (6-30-19)T
14. **Precautions When Placing or Removing Binders and Wrappers.** (6-30-19)T
- a. Binders and wrappers shall remain on the load until an approved safeguard has been provided to

prevent logs from rolling off the side of truck where binders are being released. (6-30-19)T

- b. At least one (1) wrapper shall remain secured while relocating or tightening other binders. (6-30-19)T

15. Binders and Wrappers to Be Placed Before Leaving Landing Area. Binders and wrappers shall be placed and tightened around the completed load before shifting the load for proper balance ~~and a wrapper or~~. Each load must have all required wrappers ~~shall be~~ placed and secured ~~to hold at~~ the loader ~~in place~~ before the truck is moved ~~from the landing area or out of~~. If it is unsafe to do so, the truck may be moved to the nearest safe place in sight of the landing crew loader. ~~(6-30-19)T~~ ()

16. Adequate Reaches Required. (6-30-19)T

a. Log trailers must be connected to tractors by reaches of a size and strength to withstand all imposed stresses. (6-30-19)T

b. Spliced reaches shall not be used. (6-30-19)T

c. Documented reach inspections shall be performed annually. (6-30-19)T

17. Proper Lay of Logs in Stakes or Bunks. (6-30-19)T

a. The method of loading shall be such that the logs in any tier or layer unsecured by stakes or cheese blocks shall have their centers inside of the centers of the outer logs of the next lower tier or layer so that the load is stable without the aid of binders. (6-30-19)T

b. Logs shall be well saddled without crowding so that there will be no excessive strain on the wrappers or stakes. (6-30-19)T

c. No more than one half (1/2) of any log shall extend above the stakes unless properly and securely saddled. (6-30-19)T

d. Bunk logs shall extend not less than twelve (12) inches beyond the bunk, with the exception of non-oscillating bunks. (6-30-19)T

18. Traffic Travel on Right Side of Road Except Where Posted. All trucks shall keep to the right side of the road, except where road is plainly and adequately posted for left side traveling. (6-30-19)T

19. Towing of Trucks. When trucks must be towed on any road, the person guiding the vehicle being towed shall, by prearranged signals, govern the speed of travel. (6-30-19)T

20. Scaling and Branding. When at the dump or reload and where logs are scaled or branded on the truck, the logs shall be scaled or branded before the wrappers are released. (6-30-19)T

21. Metal Parts Between Bunk and Cab to Be Covered. Suitable material shall be used on treading surfaces between the bunk and cab to prevent persons from slipping on the metal parts. (6-30-19)T

22. Bunks to Be Kept in Good Condition and Repair. (6-30-19)T

a. Log bunks or any part of bunk assembly bent enough to cause bunks to bind shall be straightened. (6-30-19)T

b. Bunks shall be sufficiently sharp to prevent logs from slipping. (6-30-19)T

23. Following Other Vehicles. (6-30-19)T

a. A vehicle not intending to pass shall not follow another vehicle closer than one hundred fifty (150) feet. (6-30-19)T

b. Passing shall be done only when it can be done safely. The passing vehicle shall consider all factors which may be essential, such as condition of the roadway, width of the road, and distance of clear visibility ahead. (6-30-19)T

24. Reaches to Be Clamped When Towing Unloaded Trailer. A positive means, in addition to the clamp, shall be installed on the reach of log truck trailers when the trailers are being towed without a load. (6-30-19)T

25. Inserting of Compensating Pin. (6-30-19)T

a. Persons shall never enter the area below suspended logs or trailers. (6-30-19)T

b. At dumps where the load must remain suspended above the bunks until the truck is moved away and when the trailer is the type with a compensating pin in the reach, a device shall be installed that will allow the trailer to be towed away from the danger area. (6-30-19)T

26. Safety Chains. (6-30-19)T

a. All trailers shall be secured with a safety chain, or chains, which connect the frame of the truck assembly to the trailer unit. (6-30-19)T

b. The chains shall be capable of holding the trailer in line in case of failure of the hitch assembly. (6-30-19)T

(BREAK IN CONTINUITY OF SECTIONS)

551. SPECIFIC REQUIREMENTS.

01. Log Dumps, Landings, Log Handling Equipment, Loading, and Unloading. (6-30-19)T

a. Only authorized persons shall operate log handling equipment. Machine operators shall be capable and experienced personnel. No persons other than the operator may be in the operator's compartment while machinery is operating, except for purposes of operating instructions. Unnecessary talking to the operator of log handling equipment while the machine is in operation is prohibited. (6-30-19)T

b. Machine operators shall make necessary inspection of machines each day before starting work. All repairs or adjustments shall be made before any strain or load is placed upon the equipment. (6-30-19)T

c. Substantial barriers or bulkheads protecting the operator shall be provided for all log handling machines where the design, location, or use of such machines exposes the operator to material or loads being handled. Such barriers or bulkheads shall be of adequate area and capable of withstanding impact of materials handled. (6-30-19)T

d. A safe and adequate means of access to, and egress from, the operator's station shall be provided. Necessary ladders, steps, step plates, foot plates, running boards, walkways, grab irons, handrails, etc., shall be provided and maintained. (6-30-19)T

e. All moving parts shall be guarded in an approved manner to afford complete protection to the operator and other workers. (6-30-19)T

f. Throttles and all power controls shall be maintained in good operating condition. (6-30-19)T

g. Landings shall be prepared and arranged to provide maximum safety for all employees and shall provide ample space for the safe movement of equipment and storage and handling of logs. (6-30-19)T

- h.** Adequate means shall be used to prevent logs from rolling into the road or against trucks. Workers shall be sure that logs are securely landed before approaching them. While unhooking chokers, workers shall choose the safest approach. This is usually from the upper side of the log. (6-30-19)T
- i.** Logs shall not be landed at loading areas until all workers, tractors, trucks, or equipment are in the clear. All persons shall stay in the clear of running lines, moving rigging, and loads until rigging or loads have stopped. (6-30-19)T
- j.** The loading machine shall be set so that the operator shall have an unobstructed view of the loading area, or a signalman shall be properly placed and his signal shall be followed. Signaling the operator shall be done by standard hand signals, whistles, or other positive means of communication. (6-30-19)T
- k.** Machines, sleds, or bases shall be of sufficient strength to safely withstand moving, and machines shall be securely anchored to their bases. (6-30-19)T
- l.** Mufflers shall be installed on all internal combustion engines of log handling equipment and located or guarded in such a manner as to prevent accidental contact with the muffler or exhaust pipes and afford protection from fumes. (6-30-19)T
- m.** Brakes shall be installed on all machine drums and maintained in effective working condition. (6-30-19)T
- n.** Brake levers shall be provided with a ratchet or other equally effective means for securely holding the drum. (6-30-19)T
- o.** Brake bands shall have a safety factor of five (5) times the stress to be imposed and they shall be of a design which will render them impervious to exposure. Operators shall test brakes before lifting any load at the start of each shift. (6-30-19)T
- p.** In no case shall stresses in excess of the manufacturer's recommendation be permitted. Equipment not carrying a manufacturer's recommendation shall not exceed stresses of more than one half of the yield strength of the material used. Conversion of cranes, shovels, etc., into yarders shall be in conformity with these rules. Necessary guylines or outriggers shall be provided and used to effectively prevent mast, A-frames, etc., from tipping or overturning. (6-30-19)T
- q.** The manufacturer's recommendations for line sizes, if in compliance with these rules, shall be followed and such line sizes shall not exceed the rated capacity of the machine using it. (6-30-19)T
- r.** Fork lifts or arms, tongs, clams or grapples shall be lowered to their lowest position and all equipment brakes set before the operator leaves the machine. (6-30-19)T
- s.** Log unloaders shall not be moved about the premises for distances greater than absolutely necessary with the lift extended or with the loads higher than necessary for clear vision. (6-30-19)T
- t.** All log handling machines which have lift arms that create a shear point with the driver's cab or position shall be provided sheer guards that will eliminate the operator's exposure to such hazard. Grapple arms or other positive means of keeping logs on the forks shall be required on fork lift-type loading machines. (6-30-19)T
- u.** All workers shall be in the clear and in view of the machine operator before a lift is made. (6-30-19)T
- v.** All mobile log handling machines shall be equipped with rearview mirrors, a horn or other audible warning device, and lights front and rear so as to illuminate the entire length of the load being lifted or carried. An automatic warning device that will activate when the vehicle is moved is preferable in areas where other workers are employed. (6-30-19)T

w. Logs or loads shall not be swung over occupied equipment or workers and no person shall ride the load or rigging. (6-30-19)T

x. While logs are being loaded, no person shall remain on the chain deck or behind the truck cab protector where they could be pinned between the end of a log and cab, tank, or cab protector. Cab protectors shall be cleaned of all loose gear before trucks are moved from the landing. (6-30-19)T

y. An unimpaired clearance of not less than three (3) feet shall be maintained from swinging or moving parts of machines, where such swinging or moving parts create a hazard to personnel. If this clearance cannot be maintained, suitable barricades or safeguards shall be installed to isolate the hazardous area. (6-30-19)T

z. A-frames, towers, masts, etc., shall be designed and constructed to provide adequate structural strength and height for positive control of materials or loads lifted. When in use, they shall be guyed or braced to provide stability and prevent tipping. Their bases shall be secured against possible displacement. (6-30-19)T

~~**aa.** When moving machines on sleds, etc., stumps shall be used, when available, in preference to trees. These stumps shall be carefully examined to make sure that they will safely withstand the strains imposed by moving. If there is any doubt, the stumps shall be tied back. Insecure trees used for holds shall be guyed. Workers shall stand in the clear while pulls are being made. When holds are being changed, the machine shall be secured with a separate line if there is danger of the machine sliding. When snubbing machines down steep grades, the main line shall be used for snubbing and the haul back for pulls. Only the operator and those required to assist him shall ride on the machine while it is being moved.~~

~~NOTE: All lines, blocks, etc., and their use shall be in conformity with the applicable provisions of the "Rigging, Lines, Blocks, and Shackles" (IDAPA 07.08.09) of this Standard. (6-30-19)T~~

bbaa. All log handling equipment shall be equipped with brakes capable of holding and controlling the vehicle with capacity load. (6-30-19)T

eebb. A limit stop which will prevent the lift arms from over-traveling shall be installed on all electric powered log unloaders. (6-30-19)T

ddcc. Gas powered vehicles shall not be refueled while motor is running nor in the vicinity of smoking or open flames. (6-30-19)T

eedd. All log handling equipment shall be equipped with approved fire extinguisher of at least five (5) B.C. rating easily accessible to operator. (6-30-19)T

ffcc. Methods of unloading logs shall be properly arranged and used in a manner to provide protection to all employees. (6-30-19)T

~~**gg.** A substantial log dump shall be constructed at each log pond or mill dumping ground. The road bed shall be of hard packed stone, heavy planking or equivalent material. (6-30-19)T~~

~~**hh.** Where logs are dumped directly into water from truck or rail car, a substantial brow log eighteen (18) inches or more in diameter shall be provided and securely anchored. (6-30-19)T~~

ifff. After cars or trucks are spotted at such dump or landing, no person will be permitted to pass between a brow log and a truck or rail car. (6-30-19)T

~~**jj.** The use of plain end hooks without a bell is prohibited. Loading hooks shall be kept in good repair at all times. They shall be equipped with at least one half (1/2) inch diameter hand ropes in good condition and of sufficient length for workers to be in the clear. When carrying tongs, they shall not be rested on both shoulders with points around the neck. (6-30-19)T~~

kkgg. Where there is danger of tongs or hooks pulling out of the logs, straps shall be used. (6-30-19)T

~~hh.~~ All equipment should be so positioned, equipped, or protected so that no part shall be capable of coming within ten (10) feet of any power line. (6-30-19)T

~~mm.~~ Bunk logs shall extend not less than twelve (12) inches beyond the bunks, with the exception of non-oscillating bunks. (6-30-19)T

~~nn.~~ The method of loading shall be such that the logs in any tier or layer unsecured by stakes or cheese blocks shall have their centers inside of the centers of the outer logs of the next lower tier or layer so that the load is stable without the aid of binders. Logs shall be well saddled without crowding so that there will be no excessive strain on the binders, bunk chains, or stakes. No more than one half (1/2) of any log shall extend above the stakes unless properly and securely saddled. (6-30-19)T

~~oo.~~ Binders shall be so placed that they will not be fouled by the unloading machine and that they may be released from the side on which the unloader operates. Proper protection shall be provided for workers while removing wrappers. (6-30-19)T

~~pp.~~ *Whenever loads consist of logs to be dumped at different landings, lots shall be separated with gut wrappers. Wrappers shall be used for the entire load, as required for single unit loads. Not more than two (2) lots shall be loaded on a single vehicle.* (6-30-19)T

~~qq.~~ Truck drivers shall be in the clear and in view of the log unloader operator before forks are moved into the load or against it, before a lift is made. All persons are prohibited from standing under, or near, the ends of logs being lifted or moved. (6-30-19)T

~~rr.~~ Loads or logs shall not be moved or shifted while binders are being applied or adjusted.

NOTE: For logs in transit see “Log Truck Transportation” (IDAPA 07.08.12, Section 010). (6-30-19)T

~~ss.~~ *The unloading machine or lines shall be so positioned to securely hold the logs to keep them from rolling off on the side from which the wrappers, bunk blocks, or stake trips are being released, and they shall not be released until the machine is so placed. Signs to this effect shall be prominently posted at each landing or dump. An extra wrapper shall be placed to hold the logs if it becomes necessary to move a wrapper to prevent it from being fouled by the unloading machine. Stake finger trips shall be released by using rip chains. The use of hammers, peaveys, etc., is strictly prohibited.* (6-30-19)T

~~tt.~~ All log dumps, trailer loading areas, and landings shall be kept reasonably free from bark and other debris. (6-30-19)T

~~uu.~~ *Artificial log ponds, subject to stagnation, shall be drained and refilled at such intervals necessary to keep them in a sanitary condition.* (6-30-19)T

~~vv.~~ Logs in storage decks shall be so arranged as to prevent logs from rolling off the face of the deck. (6-30-19)T

~~ww.~~ All log load wrappers shall be arranged so that they must be released in view of the unloader operator or signal person. When binders are released by remote control devices and when the person releasing the binders is in a safe location, and when in view of the unloading operators, or signal person, the binders may be released from either side. After the unloading machine is in position to hold the load, the binders shall be removed and the person removing them shall be in a safe location in view of the operator. The operator will be given a signal by the person releasing the binders before the machine or load is moved. (6-30-19)T

~~02.~~ **Log Ponds.** (6-30-19)T

~~a.~~ *Pond walks shall be kept in good repair and free of protruding nails and obstructions.* (6-30-19)T

~~b.~~ *Persons working on logs or around booms in water shall wear sharp caked shoes. When conditions such as snow and ice render calks ineffective, other types of shoes with “safety soles” may be worn.* (6-30-19)T

~~e. Approved buoyant life vests or life jackets shall be worn and fastened by the persons working on water. (6-30-19)F~~

~~d. Pike poles shall be of metal, fiberglass, or continuous, straight grained No. 1 wood material. Metal or conductive pike poles shall not be used around exposed electrical conductors. Defective poles, blunt or dull pikes shall not be used. They shall be restricted to the use for which they are intended. (6-30-19)F~~

~~e. Sufficient walkways and floats shall be provided and securely anchored to insure the safe passage of workers. (6-30-19)F~~

~~f. Decks of floats or other walkways shall be kept reasonably level and above the waterline at all times and shall be capable of supporting four (4) feet from log haul. (6-30-19)F~~

~~g. Pond walkways shall be at least four (4) feet or more in width for a distance of at least forty (40) feet from log haul. (6-30-19)F~~

~~h. Gaps between end of boom sticks or walkways shall not be over twenty four (24) inches. (6-30-19)F~~

~~**03. Booms Rafting Towing. (6-30-19)F**~~

~~a. Life rings with a minimum of fifty (50) feet of approved line attached shall be provided at convenient points where water is more than five (5) feet in depth. Life rings shall be maintained so as to retain their positive buoyancy. (6-30-19)F~~

~~b. Workmen, whose duties require them to work from boats or from floating logs, boom sticks, or walkways along or on water, shall be provided with and shall wear approved, positive, buoyant equipment while performing such duties. (6-30-19)F~~

~~**04. Stiff Booms. (6-30-19)F**~~

~~a. All stiff booms shall be made of not less than two (2) boom sticks. Width of stiff booms shall be not less than thirty six (36) inches from outside to outside float logs. Float logs shall be fastened together with not less than four by six inch (4" x 6") cross ties, or equivalent, or cable lashings notched into float logs. All stiff booms and floating walkways shall be decked with not less than two by six inch (2" x 6") planking and kept free of snow and other debris. (6-30-19)F~~

~~b. All sorting gaps shall have a substantial stiff boom on either side of gap. Stiff booms or walkways shall be planked over with not less than two by six inch (2" x 6") or wider planks and shall be kept free of tripping hazards. (6-30-19)F~~

~~**05. Boom Sticks and Foot Logs. (6-30-19)F**~~

~~a. All regular boom sticks and foot logs shall be made of sound straight timber and shall be free of protruding knots and bark, and shall be of a size to support two (2) workers above the water line. (6-30-19)F~~

~~b. Boom sticks which have been condemned shall be marked with three (3) chopped crosses ten (10) feet from the butt end and shall not be reused as boom sticks. (6-30-19)F~~

~~c. Gaps between ends of boom sticks shall not be over twenty four (24) inches. All wire shall be removed from boom sticks or boom chains before they are reused or stored. (6-30-19)F~~

~~d. When power driven machinery is used on booms or sorting jacks, it shall be placed on raft or float with enough buoyancy to keep machine well above waterline. If electric power is used it shall be grounded in an approved manner. Electric powered hand tools shall not be used unless the tool has a positive ground. (6-30-19)F~~

- ~~e.~~ ~~When dog lines become hazardous, they shall be discarded.~~ (6-30-19)T
- ~~f.~~ ~~Booms, ponds, sorting jacks or walkways, shall be provided with sufficient illumination for all employees to have clear vision at all points where work is being carried on.~~ (6-30-19)T
- ~~06.~~ **Pond Boats and Tow Boats.** (6-30-19)T
- ~~a.~~ ~~All persons whose duties require them to work from boats, floating logs, boom sticks, or floating walkways shall wear sharp calked shoes. When conditions render calks ineffective, other approved foot gear may be worn.~~ (6-30-19)T
- ~~b.~~ ~~All metal decks of pond boats or tow boats shall be covered with a material that will prevent slippage of calks.~~ (6-30-19)T
- ~~c.~~ ~~All boats used by workmen shall be provided with at least one (1) life ring with fifty (50) feet of approved line attached.~~ (6-30-19)T
- ~~d.~~ ~~All power boats shall be provided with one (1) or more approved fire extinguishers of five (5) B-C rating or more for each fifteen (15) feet in length.~~ (6-30-19)T
- ~~e.~~ ~~Power boats shall not be re-fueled while the motor is running.~~ (6-30-19)T
- ~~f.~~ ~~All powered boats shall be vented in accordance with U.S. Coast Guard Regulations.~~ (6-30-19)T
- ~~g.~~ ~~All powered boats shall conform to operating requirements of the U.S. Coast Guard where applicable.~~ (6-30-19)T
- ~~07.~~ **Trailer Loading Hoist/Sawmill Log Dump.** (6-30-19)T
- ~~a.~~ The hoist shall be designed and constructed in accordance with the National Electrical Code, so as to provide safe loading or unloading of the trailer. (6-30-19)T
- ~~b.~~ The hoist shall be equipped with a limiting device to maintain safe take-up limits of line on the hoisting drum. (6-30-19)T
- ~~c.~~ Regular service and inspection of the hoist and hoisting equipment shall be made to assure reliable serviceability of the facility. (6-30-19)T